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### NAVAL WAR COLLEGE NEWPORT, RI

OPDEC:
THE OPERATIONAL COMMANDER'S KEY TO SURPRISE AND VICTORY

by

Jeffrey A. Kwallek

Lt Col, U.S. Air Force

A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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#### Abstract of

#### OPDEC:

#### THE OPERATIONAL COMMANDER'S KEY TO SURPRISE AND VICTORY

This paper examines operational deception (OPDEC) as the operational commander's key to achieving surprise and victory. The paper describes what OPDEC is and discusses some important principles for conducting successful deception operations. In the context of those principles, it reviews four highly successful deception cases—the 1956 Sinai Campaign, the 1967 Six Day War, the 1973 Yom Kippur War, and Desert Storm, highlighting significant lessons learned and their relevance for the operational commander today. It then addresses some challenges for the operational commander both in conducting and countering OPDEC. The paper closes with recommendations and conclusions focused on the relevance of OPDEC to the operational commander today.

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## OPDEC: THE OPERATIONAL COMMANDER'S KEY TO SURPRISE AND VICTORY

#### CHAPTER I

"A modern war is not like a tourney. The code of honor of feudal times is no longer valid. Every means is permitted which deceives the enemy and induces him to take wrong steps. The lion's bravery and the fox's cleverness must combine to wrest the victory from the enemy."--General Waldemar Erfurth, German Army!

#### Introduction

Honesty, "straight-shooting," playing by the rules—these are concepts that are highly valued by most Americans. To many, the concepts of trickery, deceit, and deception are abhorrent. Perhaps this is due in part to the traditional need in business to be able to operate under a commonly understood set of rules and ethics in order to provide for stability, progress and success. To most with a "western psyche" for fairness, it only seems right that the "playing field be level." However, one area where even the western "civilized nations" often depart from the ideals of honesty,

truth and straight-shooting is politics. Apparently, the desire to win in politics often overrides nearly all other considerations, and if it takes "dirty tricks" or a clearly unfair advantage to win, so be it. For many, the ends here seem to justify the means. The great military theorist, Carl von Clausewitz said that war is just a continuation of politics by other means. Perhaps that offers at least a tongue-in-cheek explanation of how deception was originally introduced in warfare.

War is obviously a very serious business, however, and deception operations historically have played a very significant role in that business. Operational deception (OPDEC) has proven to be of immense value to campaign commanders to help them achieve surprise, a fundamental and timeless principle of war. The results, as will be demonstrated by a brief look at an interesting series of case studies from recent campaigns, speak for themselves. Historical cases, highlighted today by the stunning success of the U.S.-led coalition in DESERT STORM, make a case for the continuing relevance of OPDEC for the operational commander.

In <u>Stratagem: Deception and Surprise in War</u>, Barton Whaley examined nearly two hundred historical cases of deception. As a result of his extensive study he concluded, "A general finding of my study. . . the deceiver is almost always successful <u>regardless</u> of the sophistication of his victim in the same art. On the face of it, this seems an

intolerable conclusion, one offending common sense. Yet it is the irrefutable conclusion of the historical evidence. H2 As part of his study, Whaley looked at sixty-eight cases of strategic deception between 1914 and 1968 and found that surprise was achieved in ninety-two percent of those cases. Even more significant, victory resulted in eighty-seven percent of those cases. When he examined forty-seven cases of operational and tactical deception covering the same period, Whaley determined that surprise was attained and led to victory in ninety-one percent of the cases.<sup>3</sup>

Clearly, it is incumbent upon the commander to do his best to know the enemy and how he is likely to fight. No responsible commander can ignore the tremendous value and impact of deception. Certainly many, if not all, potential enemies appreciate and value the critical importance of surprise in warfare. Most will undoubtedly understand the critical contributions that deception can make to achieve that surprise. Since many potential adversaries have been trained (and continue to train) in fundamentals from the basic military doctrine of the former Soviet Union and the philosophy of strategists such as Sun Tzu and Mao Tse Tung, it follows that the operational commander ought to have a clear understanding of those precepts, since he may well have to face an adversary who practices those teachings.

Deception in warfare has had tremendous significance in the past and it is extremely likely that we will continue to see opponents try to use deception against us. And, in terms of "friendly" OPDEC, technological advances and capabilities provided by sophisticated overhead surveillance systems (satellites) and the increasingly intrusive and pervasive nature of the news media worldwide will challenge the operational commander.

This paper will first take a look at what OPDEC is, and then consider some OPDEC principles and guidelines. With a basic understanding of OPDEC as a foundation, four recent military campaigns will be examined, each of which is instructive in the discussion of deception. The focus will then shift to challenges facing the operational commander today—both in terms of trying to use OPDEC and of trying to counter enemy deception. The final chapter proffers conclusions and recommendations.

#### CHAPTER II

"The mission of operational deception is to disguise operations preparations and mislead the enemy about the intentions and character of impending actions."

--Marshall Georgi K. Zhukov, Soviet Army

#### What is OPDEC?

Our principle adversaries for many years, the Soviets viewed deception as the means to attain the critical advantage of surprise, and they thoroughly developed a doctrine focused on deception. They termed their deception doctrine Maskirovka, which was so detailed and comprehensive that it could truly be characterized as a sophisticated art. The doctrine of Maskirovka was integrated at all three levels of warfare (tactical, operational and strategic) and so significant to the Soviets that they considered it to be "part of the bedrock of Soviet military practice." Although the Soviet Union may be merely a memory for many, their basic military doctrine and philosophies permeate many militaries and potential adversaries today. The point being, although we may no longer face the Soviet military per se, we will almost certainly face practitioners of their deception doctrine.

The Soviets wrote extensively about Maskirovka, and published military manuals on how to conduct OPDEC. The U.S.,

Manual 90-2 did address deception, until recently, U.S. military commanders had scant guidance on OPDEC. Joint Chiefs of Staff Publication 3-58, <u>Doctrine for Joint Operational</u>

<u>Deception</u> (Initial Draft, June 1992) provides a beginning for redressing the dearth of OPDEC guidance for operational commanders. JCS Publication 3-58 says, "OPDEC are those operations conducted by military commanders of combatant commands and joint task forces in support of overall campaign objectives." Simply stated, (OPDEC) is conducted to mislead your adversary as to your true plans and capabilities. You work to make your enemy believe what you want him to believe, which is something other than what you really intend to do.

JCS Publication 3-58 also describes six basic principles for OPDEC, which are summarized in the following chapter.

Successful OPDEC is an extremely valuable force multiplier for several reasons. It can be used to manipulate the enemy, causing him to respond in ways that may negate advantages he possessed prior to the deception operations. It can dramatically alter the ratio of forces engaged when combat activities commence, and it can significantly impact the ratio of friendly to enemy casualties. Whaley concluded that the surprise resulting from successful deception operations "multiplies the chances for a quick and decisive military success, whether measured in terms of explicitly sought goals, ground taken, or casualty ratios. For example, surprise was

found to quintuple the favorability of battle casualty ratios. \*7 The significant advantage of influencing casualty ratios to one's favor was forcefully demonstrated by the Israelis during The Six Day War, which will be discussed in Chapter IV. In terms of relevance to this discussion, the reader is reminded that the surprise providing favorable casualty ratios is achieved in many cases through effective OPDEC.

#### CHAPTER III

"All warfare is based on deception. Therefore, when capable, feign incapacity; when active, inactivity. When near, make it appear that you are far away; when far away that you are near. Offer the enemy a bait to lure him; feign disorder and strike him."

Sun Tzu, The Art of War8

#### Principles for Deception

A survey of the literature on deception reveals at least several different sets of principles, guidelines, or maxims recommended for deception planning and operations. Although these guidelines differ somewhat in content and emphasis, they were derived from examination of various deception operations in history. One of the more lengthy sets of deception guidelines is contained in the study, <a href="Deception Maxims: Fact">Deception Maxims: Fact</a> and Folklore, published by the U.S. Central Intelligence Agency. The CIA study lists ten guidelines based on historical deception operations. While these CIA-published guidelines present some important deception principles, most of their basic concepts are encapsulated in another set of principles stated more succinctly in Michael Dewar's The Art of Deception in Warfare. Before turning to Dewar's

principles, however, it is appropriate to consider current U.S. military guidance on OPDEC.

Since U.S. operational commanders will develop their OPDEC in accordance with principles established in applicable military publications, it is logical to consider those principles in this discussion. The OPDEC principles contained in JCS Publication 3-58, <u>Doctrine for Joint Operational</u>

Deception, are summarized for the purposes of this discussion as follows:

- 1. Goals: OPDEC directly supports the operational commander's objectives by causing the enemy commander to incorrectly assess opposing force capabilities, and to fail to employ the enemy forces to the best advantage.
- 2. Objectives: OPDEC objectives must support the commander's objectives. They include actions or inactions by the enemy commander as shaped by the commander conducting the OPDEC.
- 3. Stories: OPDEC stories consist of the false reality created to cause the enemy commander to incorrectly assess the situation. It is of critical importance that the story be believable or credible to the enemy commander, verifiable by the enemy, and consistent with related activities.
- 4. Targets: The mind of the enemy commander is the primary target of OPDEC. The intent is to mislead

the enemy into taking actions or failing to take actions to create favorable, exploitable situations for the commander exercising OPDEC.

- 5. <u>Means</u>: Physical, technical, and administrative methods, resources and techniques provide the means for presenting the OPDEC Story to the Target.
- 6. Feedback: This critical process provides the commander and OPDEC staff the information needed to assess the effectiveness of the OPDEC on the enemy. Intelligence support is vital in Feedback.

JCS Publication 3-58 is certainly a step in the right direction; however, for this writer, the six principles listed above fall short of really providing what is generally expected of the concept of "Principles." It seems, rather, that Principles 1, 2, and 5 are little more than definitions and offer little real "meat" in terms of principles. There are some key concepts of deception operations that are not yet articulated in the JCS publication on OPDEC. As mentioned previously, Michael Dewar, after examining numerous historical deception operations, has developed a relatively concise set of deception guidelines.

Dewar developed five practical and easy-to-understand "Principles of Deception" worth careful consideration by the operational commander. The essence of his principles follow, in summarized form: 10

- 1. Centralised Control and Coordination: Minimize confusion among friendly forces and ensure friendly forces do not inadvertently work at cross purposes.
- 2. <u>Sound and Thorough Preparation</u>: Cover all bases in terms of intelligence preparations and developing the actual plan. Anticipate the enemy's reaction to each phase of the deception operation.
- 3. Deception Must be Believable to the Enemy:

  Deception works best if it falls within the bounds of reasonable expectation by the enemy. It is most convincing if just enough detail is provided to steer the enemy analyst into working-out the information himself to make the assumption you desire.
  - 4. Target All Possible Intelligence and

    Surveillance Sources: Caution—it is possible that

    if the picture is too complete, it may arouse

    suspicion in the adversary.
  - 5. Operational Security Must Be Maintained: "Only those who really need to know." OPDEC is tightly intertwined with Operational Security (OPSEC), since they are both conducted to prevent the enemy from determining your real plans and intent. "Deception cannot succeed without effective OPSEC."

Although there are some interesting case studies from history, especially from World War II, where a large number of people knew about and were engaged in large deception operations, it seems obvious that for operational security, the fewer people who know about a deception operation, the better.

Dewar's principles appear to offer more in terms of conducting successful OPDEC than those contained in JCS
Publication 3-58. However, the last JCS principle concerning
Feedback is extremely important and offers a valuable addition to round-out Dewar's principles. The feedback principle was also emphasized in the CIA's ten maxims of deception mentioned previously. With the addition of the JCS principle of feedback, Dewar's principles strike this writer as the best guidance package he's seen for conducting OPDEC today. In addition to the principles as stated, there are several other concepts characteristic of successful OPDEC. Obviously, OPDEC must be solidly linked to and integrated with deception efforts at the tactical and strategic levels. To be successful, deception planning and execution at all three levels must be carefully orchestrated.

#### CHAPTER IV

"The war of deception was always there; and it is being fought today."--Michael Dewar, The Art of Deception in Warfare 12

#### OPDEC in History: Selected Case Studies

- The history of warfare provides many interesting and instructive examples of deception. Nearly everyone is familiar with the story of the Trojan horse, which was actually just one part of a successful deception plan executed by Odysseus to achieve surprise and victory at Troy. An important aspect of the story is that the deception was carried-out to end a long, essentially stalemated war. Whether one considers the story of the Trojan horse to be based in fact or to be purely fiction is inconsequential; what is significant is that the story illustrates that the concept of using deception in warfare to achieve surprise and victory has ancient roots.

Moving to the more recent context of the Second World War, a number of case studies of highly successful deception operations have been documented. One of the best known deception operations was developed and executed to cover the Allied invasion of Normandy. The code name for the invasion was Operation Overlord. While discussing deception to cover

invasion plans with Roosevelt and Stalin during the 1943 "Big Three" conference in Teheran, Winston Churchill said, "In wartime, truth is so precious that she should always be attended by a bodyguard of lies." It is interesting to note that the code name for the resulting deception operation to cover the invasion was Bodyguard. Although this massive deception has been analyzed by a number of writers, there were numerous other significant deception operations carried-out by the Germans, the Soviets, and the Japanese, as well as the western Allied commanders during the course of the war.

In particular, the Soviet Army raised OPDEC to an art form, and successfully conducted repeated operational-level deceptions to surprise German commanders throughout the war. 14 During the "Big Three" conference, Stalin described his army's employment of OPDEC to Churchill and Roosevelt:

Stalin described how the Soviet Army went about it.

We misled the enemy in such cases, he said, by
building dummy tanks and planes and mock airfields.

The dummies were moved about, enemy intelligence
reported these movements, and the Germans thought
that was where an offensive was being prepared,
while where it really was being prepared everything
was kept absolutely quiet, all movements were
carried out under cover of darkness. There would be
as many as five or eight thousand dummy tanks and
two thousand dummy planes in some places, and large

numbers of mock airfields. Then, too, we used radio to fool the enemy. Transmitters in places where no offensive was planned set up a lot of activity, and the enemy got the impression that there were large forces in the area. Sometimes enemy planes bombed these places day and night when actually they were quite empty. 15

Deception activities and operations similar to those described by Stalin have been repeated successfully in more recent campaigns. In particular, the Israelis integrated those types of deception techniques into detailed deception plans to achieve remarkable surprise over their Arab enemies during the 1956 and 1967 Arab-Israeli wars. A brief examination of some highlights of those campaigns may provide an insight into the viability of the five basic deception principles proposed by Michael Dewar, which were discussed in the preceding chapter. If Dewar's principles appear to be validated when analyzing OPDEC in recent military campaigns, the principles would seem to be of value to operational commanders today.

#### Case Studies in Deception: The Arab-Israeli Campaigns

#### 1956: "The Sinai Campaign"

Israel faced several threats in 1956--Egypt had tightened her blockade on the Straits of Tiran and Jordan had become increasingly hostile to Israel. Israel decided "to launch a preemptive surprise attack against Egypt to seize the entire Sinai in a 7 to 10-day campaign." Israeli Army Chief of Staff Moshe Dayan developed a deception plan to provide the surprise the campaign needed. In September and October 1956 Israel prepared for an attack against Egypt, but used her deteriorating situation with Jordan as a diversion to mask her true intent. Integrating deception at all three levels (strategic, operational and tactical), the Israelis conducted a series of activities focused on Jordan, including reprisal raids and preparations along the Jordanian border to draw attention from their real purpose.

The overarching focus of the deception was to draw the attention to Jordan rather than to Egypt. When the Israelis mobilized their reservists in mid-October, it was claimed to be in response to Iraqi troops allegedly moving into Jordan. The deception plan was believable to the enemy; It might be added parenthetically that it was believable to most the world. General Dayan paid attention to the deception in even the smallest details—when patrols were dispatched to reconnoiter the Egyptian frontier in preparation for the

attack, Dayan directed that they wear Bedouin sandals to make their footprints appear to be those of Arabs. 17 Dayan maintained centralised control and coordination for the overall plan. After declaration of a curfew along the Jordanian border, the world expected that an Israeli attack on Jordan was imminent. Dayan even tied the mobilization and call-up of the 100,000 Israeli reservists into the deception, by disseminating the mobilization orders entirely by word of mouth rather than by using the expected (and vulnerable to monitoring) method of radio announcements. 18 This precaution illustrated the careful attention given OPSEC in the plan. The Israeli deception was a superb success--"On 29 October, Israel achieved total surprise in the Sinai."19 Israel extended deception operations during the actual campaign by making it appear to the Egyptians that the initial Israeli paratrooper insertion in the Sinai was just a reprisal raid rather than the start of a campaign to capture the entire Sinai.20 The deception plan was thoroughly prepared in detail to anticipate and shape enemy responses. Following the initial surprise, the Israelis conducted tactical deceptions by broadcasting "ambiguous and incomplete information about the scope and nature of the operation. "21 The Israeli deception was particularly effective in targeting as many enemy intelligence and surveillance sources as possible -- they appear to have really carefully thought through all aspects of how to mislead the Arabs. Whaley considers the Israeli deception supporting

this campaign to be one of the finest examples of deception, integrating strategic and tactical deception with the military campaign plan (operational level). The plan executed during the 1956 Sinai Campaign appears to validate Dewar's five principles of deception.

#### 1967: "The Six Day War"

During the Six Day War, the Israelis once again employed a series of deception operations to achieve tremendous surprise and a "stunning victory."23 In light of the increasingly threatening situation with Egypt, exacerbated by their Soviet-aided military buildup, and the blockade of the Tiran Straits, Israel's Cabinet decided they needed to conduct a preemptive strike against Egypt. They developed another very well integrated deception operation to set-up their strike. Again, the Israelis maintained strong centralized control and coordination, which included careful integration of the deception plan at all three levels. The deception at the strategic level included statements from Defense Minister Moshe Dayan to the press that Israel intended to seek a diplomatic solution to their crisis with Egypt. Just appointed Defense Minister on 3 June, Dayan used the world media to help anchor his deception by stating, "The Government--before I became a member of it--embarked on diplomacy: we must give it a chance. "25 Dayan also stated that if the situation did in fact lead to war, it would not be

made just 38 hours prior to the Israeli attack). Although Israel had in truth already decided to attack Egypt with a daring first strike, they reinforced their deception by putting several thousand soldiers on leave and by delaying full mobilization of the Israeli military until the actual morning of the attack. Newspapers on 4 June, the day before the attack was to commence, showed photographs of Israeli soldiers lounging at the beach. The old adage about the worth of a picture was not overlooked as the Israelis exploited the media to further bolster the deception. This was part of their efforts to target all sources of Arab intelligence and surveillance.

In addition to the initial efforts at the strategic level, the thoroughly prepared plan included deception activities at the tactical level as well. These deceptions contributed to joint OPDEC, involving Israeli air, land and sea forces. Each was designed to anticipate and shape specific Arab responses. The Israeli Navy successfully deceived the Egyptians into believing the Israelis planned to mount major amphibious operations in the Red Sea. This successful deception tied-up 30 percent of the Egyptian Navy. The Israeli Army conducted deception operations by using camouflage to mask their mobilized ground force deployments from the Egyptians. The \rmy also used dummy tanks to give the appearance of major activity in the southern

Sinai, drawing Egyptian attention away from the real intentions of the Israelis.29 Whaley points out that the Israelis had used this same deception successfully during the 1956 war. The deception operation conducted by the Israeli Air Force was the key reason they attained such surprise on 5 June. The Egyptians had essentially been desensitized or habituated to routine Israeli aircraft patrols out into the Mediterranean. Because of this, the Israeli aircraft operations on the morning of the attack did not arouse any significant Egyptian concern. The deception plan further covered the attack on the Egyptian Air Force by flying beneath Egyptian radar and by using no electronic countermeasures which would have alerted the Egyptians to the oncoming Israeli attack--one illustration of tight OPSEC. In terms of making the plan believable to the enemy, the overall deception was very effective in making the Arabs believe that Israel was not about to do what she was really intent on doing. The result was destruction of the Egyptian Air Force on the ground, and subsequent successful ground offensives in the Sinai, Jordan and Syria.31

All the pieces of the plan fit together to result in a stunning, remarkably effective deception. The results of the Israeli surprise were nothing short of staggering: Israel sustained 730 killed in action (KIA) as contrasted to 23,000 KIA for the Arabs, lost just 61 tanks as compared to 780 for the Arabs, and lost just 26 aircraft while destroying 452 Arab

aircraft (393 destroyed on the ground). Michael Dewar wrote, "There is perhaps no better example in post war history of the successful use of deception leading to complete surprise and total victory. 1133

#### 1973: "The Yom Kippur War"

The Yom Kippur War of 1973 presents an interesting reversal of what the Israelis did so successfully in 1956 and 1967. In this case, it was the Egyptians who "turned the tables" to carry out deception operations to mask a surprise attack on Israel. Although it has been argued that the ultimate reason for Egyptian surprise was not due so much to their deception operations as it was due to Israeli failures to see and understand numerous signals, the Yom Kippur War nonetheless provides an instructive example of another well-crafted and well-orchestrated deception.

In this case, the Israelis overlooked the possibility that the Arabs might be willing to initiate war to support national objectives more limited than a total victory over the Israeli military. In addition, Israel's past successes led them to make the errors of overestimating their own military prowess while at the same time dangerously underestimating the Arab military capability to conduct offensive operations across the Suez.<sup>34</sup>

The Israelis misled themselves by believing that Egypt and Syria simply would not initiate a war unless they were

reasonably sure they could defeat the Israelis militarily. Since their assessment was that the Arabs did not possess the wherewithal to defeat them, the Israelis did not seriously consider the prospect of an Arab attack. The Egyptians and Syrians bolstered this misperception by conducting deception operations intended to make the Israelis believe that the Arabs were not physically ready, in terms of weapons and military equipment, to start a war. The Arab deception effort was thus from the start, believable to the enemy. One way they did this was to make public complaints about the poor quality of their Russian-supplied equipment.

The Egyptians skillfully employed the same type of deception tactics Israel had used in 1967 to desensitize the enemy to military maneuvers and operations. The Egyptians and Syrians conducted a series of troop movements in the area of the canal over a period of nearly two years prior to the actual attack to desensitize and habituate the Israelis. Egyptian president Sadat also made repeated speeches, beginning in December 1971, that indicated "imminent confrontation with the Israelis." The deception plan was planned thoroughly to build in detail over a period of nearly two years. "Crying wolf" for two years had the cumulative effect of dulling the Israeli reaction to what had become through the deception technique of repetition, routine activities. The Arabs also used purported exercise activities

as a means to position their troops in final preparations for the attack.

"Deception was not ignored on the political level either. Toward the end of September 1973, Egyptian Foreign Minister Zayat arrived in the United States to reactivate Washington's role as mediator in the conflict and 'give peace another chance'."36 Thus, over a course of nearly two years, the Arabs effectively targeted many Israeli intelligence and surveillance sources to reinforce the deception. Deception was even involved in the selection of the very day for the attack. Not only was the day for the attack Yom Kippur, the most holy of all Jewish religious holidays, it also fell during the Muslim Holy Month of Ramadan -- a sacred time during which one would not normally expect Muslims to start a war. This is another example of the principle of "believability"-in this case, the Israelis would not believe the Arabs would attack, and especially not during such holy days. Insofar as this writer could determine from the literature reviewed, the Egyptian leadership seemed to be in control of the deception and oversaw the coordination of the plan.

In his analysis of the Yom Kippur War, Michael Handel contends that the Israelis were probably not really deceived by the Arabs. He felt that Israeli intelligence had plenty of information to signal the possibility of attack. Handel believes, "In the final analysis, the Israelis deceived themselves. Their doctrine, rigid adherence to the 'concept,'

their faith in their own deterrence power and military capabilities, their unwillingness to believe that the Arabs would take so great a risk, and their wishful thinking—all of these, rather than deception, contributed to the shattering surprise." Handel's insight leads to an extremely important lesson learned—that even when one possesses highly capable intelligence gathering capabilities, the intelligence gathered must be accurately interpreted, and must not be tainted by preconceived notions and beliefs about the enemy.

Whether one agrees with Handel's assessment or believes that the Arab deception operations were instrumental in achieving surprise for the initial attack, the stunned Israeli forces faced disaster. Literally fighting for the life of their Army and of Israel herself, the Israelis demonstrated epic heroism and remarkable military skill to "prevent a defeat by the skin of their teeth."

#### "Desert Storm"

The desert was also the setting for the most recent major military campaign involving the successful employment of OPDEC. Desert Storm was clearly a tremendous success for the U.S.-led Coalition, and that success was in large part due to the brilliant deception plan executed by the Coalition. Although much information relative to the campaign and deception is classified, there is enough unclassified material to provide a good sketch of the highlights. Although the bulk

of the deception operations were actually conducted during the Desert Shield phase of the campaign, prior to actual initiation of Desert Storm, since the OPDEC plan was in support of the actual attack and combat phase, it will simply be referred to as Desert Storm OPDEC in this discussion.

The basic military mission for Desert Storm was focused on removing Iraqi forces from Kuwait and to support restoration of the legitimate Kuwaiti government. The military mission included destruction or neutralization of Iraq's facilities to develop and manufacture nuclear, chemical, and biological weapons, and ballistic missile delivery systems for such weapons. The mission also included destruction of the Iraqi Republican Guard since they were a military center of gravity. OPDEC played a key role in defeating the Republican Guard.

The OPDEC plan was based on CINCCENT directives to "Use operational deception to fix or divert the Republican Guard and other heavy units away from the main effort." The OPDEC plan would lead the Iraqis to believe the main Coalition thrust would go directly into Kuwait from Saudi Arabia. A major amphibious assault would support the attack. If the Iraqi leadership believed this was the plan the Coalition would execute, it would then lead the Iraqis to mass their military forces in the eastern part of Kuwait and along the coast to defend against the anticipated amphibious assault.

This movement by the Iraqis would draw their forces away from the area of the actual Coalition attack.

As the deception unfolded, Coalition naval forces participated in a series of activities and demonstrations in the Persian Gulf, while the Marine forces conducted amphibious landing exercises—all reinforcing the OPDEC plan to convince the Iraqis that there would be a major amphibious assault. To further strengthen the deception, Coalition air forces conducted training missions and flew patrols over the Kuwaiti coast and along the Kuwaiti border. The ground forces also participated in this truly joint OPDEC plan by conducting a number of movements, feints and raids to draw attention to the southern Saudi/Kuwaiti border area away from the area planned for the real assault. As the time for the actual main attack drew near, the Coalition bolstered their deception by further ground movements into Kuwait, naval raids in the area, and by positioning an Amphibious Task Force near the Kuwaiti coast.

When the Coalition forces executed their true plan with the massive western attack, the Iraqis were no doubt stunned. It is clear from the results that they were surprised, confused, and not ready to repel the Coalition forces. Once again, a smart, comprehensive OPDEC plan, protected with good OPSEC, reinforced by daily (even hourly) media coverage of most all elements setting-up the deception, caught the enemy totally by surprise and the surprise led to rapid, devastating military victory. Dewar's basic deception principles seem to

have all been met during the course of the OPDEC. In briefly reviewing those principles in terms of the Desert Storm deception, there was centralized control and coordination and orchestrated deception at all three levels, with heavy emphasis on the operational level. The OPDEC plan was thoroughly prepared, and Saddam Hussein's probable reactions to the elements of the plan appear to have been included in the plan development. Clearly, the deception plan and activities were believable to the enemy; they were also believable to the media and the world, as most of the world was undoubtedly very surprised when the actual attack commenced and developed. The OPDEC plan did a very good job (from what we know from unclassified sources) in targeting all possible Iraqi intelligence and surveillance sources: actual air, naval, marine and ground movements and feints were easily monitored by Iraqi intelligence sources; the media flooded television, radio, newspapers and magazines with reports of the naval and marine operations; the Coalition used deceptive radio transmissions to further convince the Iraqis the attack would be along the southern Kuwaiti border and coast. As mentioned, OPSEC was carefully maintained -- Saddam, his Republican Guard, and most the world were caught by surprise. Finally, although feedback is not included in Dewar's principles, it is very significant in OPDEC. At least some feedback was obtained through Saddam's televised

broadcasts and printed comments, as well as Iraqi troop dispositions in response to the deception activities.

Although deception may not have been employed in every campaign ever conducted, it has been a significant factor throughout the history of warfare. The preceding case studies from recent military campaigns each bear convincing testimony to the significant advantage successful OPDEC can provide the operational commander and his forces. As demonstrated by Desert Storm and the three Arab-Israeli campaigns, deception continues to be relevant today and is an art the operational commander must know how to both effectively employ and counter. In particular, it may be argued that the Yom Kippur War illustrates how the tables may be turned to put commanders in the position of having to counter deception operations by the same enemy they had previously successfully deceived. As taught by that war, OPDEC is clearly not "a one way street."

#### CHAPTER V

#### Challenges for the Operational Commander

Operational commanders really face two different areas of challenge with OPDEC. The first involves the commander's own use of OPDEC to gain an advantage over his enemy, to achieve surprise, to minimize friendly casualties and losses, and so forth. The other area of challenge the commander must recognize and deal with concerns countering enemy OPDEC targeted at him, his forces, and the three levels exploited by deception planners. This chapter will consider those two challenges, in turn.

#### Challenges of Conducting OPDEC

Clearly, significant challenges face the commander attempting deception operations today. One of the toughest challenges results from the rapid increase in technically sophisticated and highly intrusive surveillance systems. Although the United States and Russia own the majority of the overhead systems that provide this capability, this area is a growth industry where other nations and commercial enterprises now have the means to make valuable intelligence information available to those willing to pay the price to buy their products. Dewar calls this a "transparency revolution." Although these systems are increasingly capable, and pose

daunting challenges to the deceiver, they do not negate the importance of deception operations. They may, in fact, serve to reinforce well-executed deceptions by leading an analyst into believing what a deceiver wants him to see. The key concept here is awareness that one's operations are likely to be observed through the various overhead surveillance systems. With that awareness, the operational commander can tailor some of his deception activities to target those surveillance systems, increasing his overall chance to deceive his enemy.

Yet another challenge to deception operations arises from real-time or near real-time surveillance capabilities of remotely piloted vehicles (RPVs), as well as manned reconnaissance aircraft equipped with more technically sophisticated and capable surveillance equipment. Because they include enhanced visual, radar, and infra-red capabilities, these systems compound the challenges the commander faces when seeking to use deception to achieve surprise over the enemy.

Real-time communications from virtually any location or mobile source present another OPDEC challenge. Today, even the basic foot soldier can communicate instantly from his location to report on what he observes. He can even pinpoint his location as he reports, using a commercially available, "off-the-shelf" \$500 handheld receiver tied-in to the Global Positioning System (GPS). And with night vision equipment, darkness no longer provides a shroud for secrecy. All this

spells trouble if that foot soldier is observing activities supporting your real operation. On the other hand, if he is observing part of your deception, he may be deceived and his report back will strengthen the OPSEC plan. But a very real danger to the operational commander is that the observer will be close enough or astute enough to see through the deception and report that back to his superiors.

In addition to the military challenges, the tremendous impact of the news media today is inescapable. The media seems to show-up everywhere, whether welcome or not, displaying impressively rapid response times and arriving with extremely sophisticated and capable equipment. This equipment provides the means for real-time reporting and transmission of military activities to viewers and listeners world-wide. In light of the pervasive nature and profound impact of the news media today, in all its forms, the question logically follows, "Is it still realistic for the operational commander to try to conduct successful deception operations?" The answer is unequivocal: Absolutely! Even with detailed media coverage reporting real-time from the Arabian Peninsula, we witnessed striking success from deception operations conducted during Desert Storm -- in fact, the argument may be made that in this case the news media significantly enhanced the overall deception effort.

The operational commander should not, however, be led to the assumption that what worked so well in Desert Storm will

work in the next situation. In an effort to ensure good OPSEC and lessen the threat of having his deception operations exposed, the operational commander may attempt to totally deny media access from the theater, or at the least, from selected areas within the theater. Such a decision will undoubtedly impact military-media relations and may precipitate unintended problems. There may be times, however, when the commander will choose that course to protect his operations and people. On the other hand, in so doing, the commander may effectively deny himself the opportunity to use the media to further his deception operations.

As demonstrated during the Arab-Israeli campaigns and during Desert Storm, the news media can be a very powerful and convincing reinforcer of deception activities. If exploiting the news media is included in the deception operations, it is critically important that anyone and everyone who has contact with the media says the right things to ensure "seamless" support of the deception. Whether or not everyone interviewed or quoted by the media is aware of the actual deception is not really important as long as they each relate the same information, so all reporting is consistent and leaves no openings to question.

Deception activities that operate through the news media may range from denying the media any access or information on the military operations and activities to lying directly to the media. It is important to recognize that although it may

not happen until after the war, at some point the news media will probably learn the real truth if they were deceived, and it is possible that they may have a strongly negative reaction if they feel they were intentionally misled or lied to. The operational commander can probably take large strides to defuse that potential situation by quickly letting the media know how the deception saved friendly lives, shortened the war, averted further destruction and suffering, and so forth. Conveying that perspective to the media may be done at a higher level—perhaps even by the national command authority, and of course must be done consistent with security considerations. There are obviously many possibilities in between the extremes of that range. The wise deception planner will carefully develop the best way to fit the media into the overall plan.

#### Challenges in Countering OPDEC

"Commanders must therefore be constantly aware that they will be the target of deception. They must be reluctant to accept evidence on its face value and should be automatically suspicious of information which has not received the protection of routine security precautions."

Dewar says that a "golden rule in combating deception is not to jump to conclusions." This has particular significance for the intelligence staff. It is extremely important that operational commanders do not allow themselves

or their staffs (particularly their Intelligence staffs) to fall into the trap of following preconceived ideas about the adversary. As demonstrated by the case study of the 1973 Yom Kippur War, the results of this error may well be fatal. History provides numerous other examples where senior commanders made up their minds relative to what the enemy was going to do or not going to do, and what enemy capabilities were, and let their inaccurate preconceptions lead them into disaster.

Although it is extremely difficult to recruit, train, and maintain reliable human intelligence (HUMINT) sources in enemy countries, when available, these sources may prove vital in countering enemy OPDEC. Good HUMINT sources can provide insight and information into the real purposes, intent, and capabilities of the enemy. If placed high enough in the government or military, they may be able to provide critical information to help unmask an enemy deception. Although these sorts of sources are not readily available for direct tasking by the operational commander, he can request national agency (Central Intelligence Agency) support in this effort.

It is vitally important that the operational commander also recognize that his adversary may very well attempt to use the news media for his own deception purposes. Because the enemy will likely have direct contact with not only his own "friendly" media, but also world media—including ours, he has access to a very powerful tool for supporting his own

deception operations. The critical challenge of countering enemy deception operations must be recognized by the commander. He has an inescapable responsibility to his forces, and to his country to do his utmost to meet that challenge.

#### CHAPTER VI

"The final conclusion is that there is no sure way to prevent deception."--Michael Handel44

#### Conclusions and Recommendations

Deception has been important to the commander throughout the history of warfare. While it may not have been a vital element of every war or campaign, history still shows us that at many times, in many campaigns, deception has produced surprise which has ultimately led to victory by the one who employed deception. The recent examples of the 1956 Sinai Campaign, the Six Day War, the Yom Kippur War, and most recently, Desert Storm, clearly show that the relevance of deception for the operational commander continues. Some of the most prescient thinkers and writers in the area of military strategy and warfare have taken pains to highlight the importance of OPDEC. Michael Handel stated that "Deception is the cheapest and most effective force multiplier."45 This is of particular significance in light of dramatically decreasing defense budgets and the subsequent reduction in our armed forces in terms of personnel, equipment, and capabilities. Writing from a positive perspective, Michael Dewar holds that with the continuing increase in intelligence gathering capabilities, opportunities for deception are greater, rather than diminished. The challenge is to exploit those opportunities smartly.

To ensure our future operational commanders can indeed meet that challenge, it is vitally important that the fundamentals of the art of deception be taught as an important part of Professional Military Education (PME) at our military service schools. OPDEC should be emphasized during officer PME, especially at the Intermediate and Senior Service Schools. Perhaps emphasizing creative deception by student players during wargaming would be one of the most effective ways to prepare them to be future operational commanders, and help them develop an understanding and appreciation for OPDEC. They would face not only the challenge of developing and executing their own OPDEC plans, but also have to wrestle with seeing through their opponent's deception efforts. It is absolutely imperative that our future commanders possess and employ superior OPDEC capabilities than do their adversaries.

This writer also believes that although JCS Publication 3-58 provides a good starting point for helping operational commanders and their staffs plan joint OPDEC, the publication needs considerable work to make it a more useful tool and guide. The OPDEC principles presently described in that publication don't yet give the commander or OPDEC planner enough insight into essential aspects of successful OPDEC, aspects that can be derived from recent case studies in deception. Michael Dewar's five principles of deception would

be worth considering for further analysis and incorporation into JCS Publication 3-58.

importance of military surprise, German General Waldemar

Erfurth concluded, "Secrecy, speed, movement and surprise are
thus the prerequisites of victory. Luck and art must combine
to catch the enemy by surprise. In war, the unexpected is the
most successful. Thus, surprise is the key to victory."<sup>47</sup> To
this wisdom from General Erfurth, today's commander and
student of OPDEC should add a corollary, "Deception is the key
prerequisite for surprise; it is the art in the formula,
creating the unexpected; and thus, is the key to the key to
victory."

#### NOTES

- 1. Waldemar Erfurth, <u>Surprise</u>, translated by Stefan T. Possony and Daniel Vilfroy, (Harrisburg, PA: Military Publishing Company, 1943), p. 114.
- 2. Barton Whaley, <u>Stratagem: Deception and Surprise in War</u>, (Cambridge, MA: MIT Center for International Studies, 1969), p. 146.
- 3. Michael Dewar, <u>The Art of Deception in Warfare</u>, (Devon, England: David and Charles Publishers, 1989), p. 196. Dewar is citing results Whaley reported in <u>Stratagem: Deception and Surprise in War</u>.
- 4. Richard N. Armstrong, <u>Soviet Operational Deception: The Red Cloak</u>, (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1988), p. 3.
- 5. Dewar, p. 83.
- 6. Joint Chiefs of Staff, <u>Doctrine for Joint operational</u>
  <u>Deception (Joint Pub 3-58, Draft)</u>, (Washington DC: Joint Chiefs of Staff, June 1992), p. I-1.
- 7. Whaley, p. 234.
- 8. Sun Tzu, <u>The Art of War</u>, translated by Samuel B. Griffith (London: The Oxford University Press, 1963), p. 66.
- 9. JCS Publication 3-58, pp. I-3-7.
- 10. Dewar, pp. 14-15. Following his discussion of his five principles, Dewar presents nine "techniques of Deception" which supplement his principles. These techniques are suggested as effective methods to employ to put deception operations into effect. These techniques are beyond the scope of this paper but are recommended to the reader interested in a more detailed discussion of how to put a deception into action.
- 11. JCS Publication 3-58, p. I-9.
- 12. Dewar, p. 8.
- 13. Whaley, pp. 64-66.
- 14. Armstrong, p. 1.

- 15. Whaley, p. 65.
- 16. <u>Ibid.</u>, pp. 532-533.
- 17. Richard K. Betts, <u>Surprise Attack: Lessons for Defense Planning</u>, (Washington DC: The Brookings Institution, 1982), pp. 63-64.
- 18. Whaley, p. 536.
- 19. Dewar, p. 114.
- 20. Betts, p. 65.
- 21. Michael Handel, "Deception at Suez, 1956," in David A. Charters and Maurice A.J. Tugwell, eds., <u>Deception Operations:</u> Studies in the East-West Context, (Oxford, England: Brassey's (UK) Ltd.), p 327.
- 22. Whaley, pp. 533-542.
- 23. Dewar, pp. 114-115.
- 24. Whaley, p. 573.
- 25. <u>Ibid.</u>, pp. 574-575.
- 26. Betts, p. 66.
- 27. <u>Ibid.</u>, p. 66.
- 28. Whaley, p. 577.
- 29. <u>Ibid</u>., p. 578.
- 30. Dewar, p. 115.
- 31. <u>Ibid</u>., p. 115.
- 32. Whaley, p. 588.
- 33. Dewar, p. 115.
- 34. <u>Ibid.</u>, p. 115.
- 35. <u>Ibid.</u>, p. 116.
- 36. Michael Handel, <u>Perception</u>, <u>Deception and Surprise</u>: <u>The Case of the Yom Kippur War</u>, (Jerusalem: Hebrew University Press, 1976), p. 59.
- 37. Ibid., p. 60.

- 38. Dewar, p.116.
- 39. U.S. Department of Defense, <u>Final Report to Congress:</u>
  <u>Conduct of the Persian Gulf War</u> (Washington, DC: April 1992), p. 94.
- 40. "bid., p. 90.
- 41. \_ewar, p. 207.
- 42. <u>Ibid.</u>, pp. 194-195.
- 43. <u>Ibid.</u>, p. 195.
- 44. Handel, <u>Perception</u>, <u>Deception and Surprise</u>: <u>The Yom Kippur War</u>, p. 14.
- 45. Douglas V. Smith, <u>Military Deception and Operational Art</u>, (Newport, RI: Naval War College, 1993), p. 17.
- 46. Dewar, pp. 116-117.
- 47. Erfurth, p. 115.

#### **BIBLIOGRAPHY**

- Armstrong, Richard N. <u>Soviet Operational Deception: The Red Cloak</u>. Fort Leavenworth, KS: US Army Command and General Staff College, 1988.
- Betts, Richard K. <u>Surprise Attack: Lessons for Defense</u>

  <u>Planning</u>. Washington, D.C.: The Brookings Institution,
  1986.
- Central Intelligence Agency, Office of Research and Development.

  <u>Deception Maxims: Fact and Folklore</u>. Washington, D.C.: US
  Government Printing Office, April 1980.
- Charles, David A. and Tugwell, Maurice A., eds. <u>Deception</u>
  <u>Operations: Studies in the East-West Context</u>. London:
  Brassey's Ltd., 1990.
- Clausewitz, Carl von. On War. transl. and ed. by Michael Howard and Peter Paret: Princeton, N.J. Princeton University Press, 1976.
- Cruickshank, Charles. <u>Deception in World War II</u>. New York: Oxford University Press, 1979.
- Dewar, Michael. <u>Art of Deception in Warfare</u>. Devon, England: David and Charles Publishers, 1989.
- Dunnigan, James F. and Bay, Austin. From Shield to Storm. New York: William Morrow and Company, 1992.
- Erfurth, Waldemar. <u>Surprise</u>. Transl. by Stefan T. Posony and Daniel Vilfroy. Harrisburg, PA: The Military Service Publishing Company, 1943.
- Handel, Michael I. <u>Military Deception in Peace and War</u>. Jerusalem: Hebrew University Press, 1976.
- . Perception, Deception and Surprise: The Case of the Yom Kippur War. Jerusalem: Hebrew University Press, 1976.
- Huber, Thomas M. <u>Pastel: Deception in the Invasion of Japan</u>. Fort Leavenworth, KS: Combat Studies Institute, 1988.
- Kennedy, Floyd D., Jr. "Deception in the Gulf." <u>National</u> <u>Defense</u>, April 1991, pp. 38-39.
- Parker, Robert R., Jr. "Deception: The Missing Tool." <u>Marine</u> <u>Corps Gazette</u>, May 1992, pp. 97-101.

- Smith, Douglas V. <u>Military Deception and Operational Art.</u>
  Newport, RI: U.S. Naval War College, 1993.
- Tzu, Sun Wu. The Art of War. Transl. by Samuel B. Griffith. New York: Oxford University Press, 1963.
- U.S. Air Force Intelligence Service, Special Studies Division.

  Foreign Denial and Deception (D&D): Soviet Maskirovka: A

  Bibliography. Washington DC: Air Force Intelligence
  Service, November 1986.
- U.S. Department of Defense. <u>Final Report to Congress: Conduct of the Persian Gulf War</u>. Washington, DC: April 1992.
- U.S. Joint Chiefs of Staff. <u>Doctrine for Joint Operational</u>
  <u>Deception</u>, Joint Publication 3-58. Initial Draft.
  Washington, DC: June 1992.
- Waller, Douglas. "Secret Warriors." Newsweek, June 7, 1991, pp. 20-28.
- Whaley, Barton. <u>Stratagem: Deception and Surprise in War</u>. Cambridge, MA: Center for International Studies, Massachusetts Institute of Technology, 1969.
- Wilson, G.I. "Deception is Not Forgotten." <u>Marine Corps</u> <u>Gazette</u>, August, 1992, pp. 46-47.